



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/717,818	11/21/2000	Joseph Mulavelil George	AUS9-2000-0552-US1	2114
35525	7590	12/17/2008		
IBM CORP (YA) C/O YEE & ASSOCIATES PC P.O. BOX 802333 DALLAS, TX 75380			EXAMINER ROBINSON, GRETA LEE	
			ART UNIT	PAPER NUMBER
			2169	
			NOTIFICATION DATE	DELIVERY MODE
			12/17/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptonotifs@yeciiplaw.com

Office Action Summary

Application No.

09/717,818

Applicant(s)

GEORGE ET AL.

Examiner

Greta L. Robinson

Art Unit

2169

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date: _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-6 are pending in the present application.
2. Claims 1 and 2 have been amended. Claims 7-18 have status cancelled.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-6 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Independent claim 1 is directed to a *process*, however in order to be in compliance with 37 CFR 101 a process claim must (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials) to a different sites or thing. If neither of these requirements are met by the claim, the method is not a patent eligible process under § 101 and should be rejected as being directed to non-statutory subject matter. In the present case the claim does not positively tie the statutory class to a particular hardware element which would make the method steps tangible and does not transform the underlying data. Claims 2-6 are rejected based on dependency. MPEP § 2106.IV.B. *In re Bilski*.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1, 4, 6, 7, 10, 12, 13, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishihara et al. US Patent 6,636,876 B1 in view of Ofek et al. US Patent 5,680,640.

Regarding claim 1, **Ishihara et al.** teaches a method for migrating data between a first database and second database [note: Abstract "a database copy apparatus, a database copy method, and a recording medium recorded with a database copy program, which increase the generality of a database copying irrespective of the database

structure, by partitioning a copy **source database** into predetermined regions, and **copying records and inter-record connection relations** contained in the respective regions to a copy **target database**"; **Figure 7**, copy source database 70 and copy target database 90], the method comprising the steps of:

determining dependencies among a plurality of tables in the first database [note: Figures 1-5; column 7 lines 1-19];

retrieving metadata from the first database, wherein the metadata includes definitions for tables in the first database [note: database extraction section 20 Figure 7; column 7 lines 20-60];

reading data from tables in the first database using a plurality of read operations, wherein the read operations are structured in accordance with the retrieved metadata, and wherein the read operations are in an order indicated by the determined dependencies [note: column 7 lines 20-60; column 10 lines 58-59 "In step 31, one entry is read from the extraction data file 62"]; and

writing data to a second database using a plurality of write operations, wherein the write operations are in an order indicated by the determined set of dependencies [note: column 7 lines 20-60; column 8 lines 33-40 "writes the extraction data into file storage section 60"; col. 1 line 55 through col. 2 line 17].

Although Ishihara et al. teaches the invention substantially as cited above, they do not explicitly disclose a read operation and a write operation. However, Ishihara et al. does teach reading data and writing data as part of a copy technique. **Ofek et al.** teaches a *read operation* or a *write operation* as part of a data read request and/or data

write request when migrating data from a first storage device to a second storage device [see: column 2 lines 39-48]. It would have been obvious to one of ordinary skill at the time of the invention to have combined Ofek et al with Ishihara et al. because a read operation and a write operation would allow Ishihara et al's system to read and write data to a storage medium.

7. Regarding claim 4, "performing a predetermined modification operation on the data read from the tables in the first database prior to a write operation to the second database" [note: column 8 lines 5-12 prior to a data extraction from a storage location data is added (i.e. an update process occurs)].

8. Regarding claim 6, "wherein the first database and the second database have dissimilar schemas" [note: Ishihara et al. column 11 lines 34-40 systems are not limited to the same format; also note Ofek et al. teaches an interface/communication ability when systems are incompatible column 4 lines 23-27].

9. The limitations of claims 7, 10, 12, 13, 16 and 18 parallel claims 1, 4 and 6; therefore they are rejected under the same rationale.

10. Claims 2, 3, 5, 8, 9, 11, 14, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishihara et al. US Patent 6,636,876 B1 in view of Ofek et al. US Patent 5,680,640 and Underwood US Patent 6,633,878 B1.

Ishihara et al. and Ofek et al. teach the invention substantially as applied to independent claims 1, 7, and 13 above; however they do not explicitly teach use of a markup language. Regarding claims 2, 8 and 14 Ishihara et al. teach storing the determined dependencies to identify table dependencies [see: column 8 lines 35-40 "writes the extraction data into the file storage section 60"]; however they do not explicitly state that it is done using markup language. **Underwood** teaches a conventional architecture such as a client/server system that communicates using an HTTP protocol and the data is transmitted typically in the format of a standard hypertext markup language [see: column 1 lines 46-60 standard hypertext markup language (HTML) format]. It would have been obvious to one of ordinary skill at the time of the invention to have combined Underwood with the cited references since HTML format is a well know standard format, and also provides compatibility among both similar and different platforms when transmitting data.

11. Regarding claims 3, 9 and 15, "storing the retrieved metadata" [note: Ishihara et al. "writes the extraction data into the file storage section 60" column 8 lines 35-40].

12. Regarding claims 5, 11, and 17, "storing the predetermined modification operation" [note: Ishihara et al. column 7 lines 30-60 "after extracting the data from the storage location 1 of the copy source database DB and prior to data extraction from the storage location 2, record "b313" is added to the storage location 1. In this case, an update difference such as shown in FIG. 3, section (B) is acquired"].

Response to Arguments

13. Applicant's arguments filed September 16, 2008 with respect to claims 1-6 have been considered but are not found persuasive.

In the response Applicant argued the following:

ARGUMENT: Claims 1-18 were rejected under 35 USC 112 first paragraph as failing to comply with the written description for the limitation "set of dependencies". Applicant has amended the claim deleting the limitation referencing "a set" and sated support for the term "dependency".

RESPONSE: Applicants amendment and remarks overcomes the rejection.

ARGUMENT: Neither Ishihara nor Ofek teach determining dependencies among a plurality of tables in the first database. Applicant states Ishihara inter-record connection relation merely describes two or more records that are being of the same kind, rather than specifying that a record cannot exist without another record. Thus, while Ishihara

discloses that connection relations among records may be duplicated to the copy target database, there is not teaching or suggestion of determining if the records are actually dependent on one another [see: page 12 lines 2-7 or response]. Applicant also argues Ishihara makes no mention of performing read operation in a particular order.

RESPONSE: The examiner respectfully maintains the rejection. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., determining if the records are actually dependent on one another) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). However, Ishihara et al. does provides for the limitation "determining dependencies among a plurality of tables in the first database" through teaching of "inter-record set relations" the relations are equivalent to the claimed limitation of dependencies. In order for a migration process to be implemented the system must first determine information related to specifying extraction process and location [see: Figure 1; column 7 lines 1-19]. Ishihara et al. teaches at column 10 lines 48-59 that information is described by an order. "Due to the function of the DB extraction section 20, extraction data such as shown in FIG. 12 is extracted from the copy source DB 70. The extraction data comprises; data classification, and record names and record addresses (in the case where the data classification is records), or start point and finish point addresses **for the set relations** (in the case where the data classification

is unsolved set information). Furthermore, the solved set information is described by the **order** of the list of the entries.”

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Abrams US Patent 6,151,608 *teaches migrating data through enforcing referential integrity, data dependencies and order of operations* (note abstract).

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greta L. Robinson whose telephone number is (571)272-4118. The examiner can normally be reached on M-F 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tony Mahmoudi can be reached on (571)272-4078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Greta L. Robinson/
Primary Examiner, Art Unit 2169a
December 10, 2008